



Building Consistency Meeting Minutes – 4.4.17 COMMERCIAL

Public Attendance (Contractors, Architects, Engineers): 19

MCCE Staff Attendance: 41

Overview of Today's Agenda

- Today's agenda items: 5 recap, 8 new.
- Today's training topic – MagTech & Thermocrete.

Welcome, Housekeeping, & Customer Service

- Mecklenburg County Code Enforcement is abbreviated as MCCE throughout the minutes.
- Consistency meetings in all trades have adopted a 4-hour format with 2-hours for consistency items and 2-hours allotted for ISO & CE. With regard to staff ISO hours, these meetings & trainings are able to be counted as Technical or Mentoring ISO time if one chooses, but any portion of time counted as one ISO category could not also be counted as any other category. Trade consistency meetings are scheduled as follows:
 - Building Consistency (Comm) – 1st Tuesday of every month @ 8am.
 - Building Consistency (Res) – 1st Wednesday of every month @ 8am.
 - Electrical Consistency – 2nd Wednesday of every month @ 8am.
 - Mechanical Consistency – last Tuesday of every month @ 8am.
 - Plumbing Consistency – last Wednesday of every month @ 8am.
- Reminder of deadline established for topic/question submissions to building consistency team:
 - Third Wednesday of every month.
 - Deadline set to allow team time to research/explain code logic behind decisions.
 - Submit by email to Jeff Vernon, Bldg Code Administrator
jeff.vernon@mecklenburgcountync.gov
 - Submit online:
<http://charmeck.org/mecklenburg/county/LUESA/CodeEnforcement/Tools/Forms/Pages/ConsisTopicSubmit.aspx>
- Training topics for future building consistency meetings, Comm (C) & Res (R). Topics in **bold** are approved to count toward CE credit hours; all topics count toward ISO hours.
 - **Apr 5 - (R) – Wall Bracing (Patrick Biddy, Plans Examiner)**
 - **May 2 - (C) - Accessibility Q & A (Laurel Wright, NC DOI)**
 - May 3 - (R) – TBD
 - June 6 - (C) – TBD
 - June 7 - (R) – TBD
- Building code qualification classes at CPCC
 - 2017 April 28-30; May 12-14 – Level I
 - 2017 July 21-23; Aug 5 & 6 – Level III
 - 2017 Sep 22-24; Oct 7 & 8 – Level II
 - 2017 Nov 17-19; Dec 1-3 – Level I

Commercial Consistency (5 review items, 8 new item) – 2hrs of Tech ISO

1. Open items or unresolved questions from last meeting:
 - a. Is sleeping unit separation required in an apartment when the bedrooms are leased out individually but the kitchen and living areas are common space for all to use (i.e. student housing)?

No. Per Carl Martin, Chief Bldg Code Consultant @ NC DOI, there is no code req'mt to separate bedrooms within the same dwelling unit. The definition of a Sleeping Unit

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states that spaces meeting this definition, that are also part of a Dwelling Unit, are no longer considered Sleeping Units and become just part of the Dwelling Unit.

b. **What are the required door widths within dwelling units and sleeping units?**

- Per 1008.1.1, exception 7, of the 2012 NC Bldg Code, the minimum door clear width is not limited for interior egress doors within a dwelling or sleeping unit that is not req'd to be a Type A or B unit **unless** you are in a Group R-1 Occupancy. In R-1 Occupancies the minimum door clear width is 32".

- This question stems from a project involving an R-1 Occ where the Owner's corporate hotel standard would not allow for the use of a cased opening in a specific location which would have provided the min 32". Their standard req'd a door, and the space available for the opening would not accommodate a large enough door to meet the min clear 32". In this case the req't of the Bldg Code is more restrictive & takes precedent over the corporate standard.

- An attendee of the meeting asked if door into bathrooms in R-1 Occupancy dwelling or sleeping units had to have a minimum door clear width of 32". Jeff Vernon, Bldg Code Administrator, said yes.

c. **How are occupant loads calculated for Occupancy/Use, Egress, & Plumbing Fixtures?**

- Occupant load is calculated based on the function of a specific space per Table 1004.1.1; this can be different than the Chp 3 Occupancy Group designation for the bldg or overall space.

- Occupancy/Use (chp 3)

- The result of the occ load calc per Table 1004.1.1 can lead to Occ Group changes for Assembly Occupancies based on exceptions in 303.1, however, the occ load is still calculated by the specific function of the space per 1004.1.1.

- Egress

- The result of the occ load calc per Table 1004.1.1 is applied to each means of egress component (Exit Access, Exit and/or Exit Discharge).

- Plumbing Fixtures

- The result of the occ load calc per Table 1004.1.1 is applied to Table 2902.1 within the **initial** Occ Group of the bldg or overall space as determined by Chp 3, prior to any Occ Class changes allowed by exceptions. For example, a restaurant w/ an occ load that allows it to be considered a Business Occupancy is still a restaurant under Assembly classification in Table 2902.1.

- Steve Dietz, HCDT Plans Examiner/Inspector, asked what does one go by when the occ load is being changed. Does the number of req'd plumbing fixtures need to be re-evaluated? Jeff Vernon, Bldg Code Administrator, verified with the Plumbing Code Administrator after the meeting that, per footnote 'j' of Table 2902.1 in the 2012 NC Bldg Code OR Table 403.1 in the 2012 NC Plumbing Code, when the occ load is being increased then the plumbing fixtures also need to be increased accordingly.

- Specific to breakrooms for employees, Jeff Vernon said if they are 100 sq.ft. or less in area, then their occ load could be calculated using the occ load factor for business areas in Table 1004.1.1, which is 100 sq.ft./occ (gross). Breakrooms larger than 100 sq.ft. will be calculated as an assembly function, unconcentrated tables & chairs, at 15 sq.ft./occ (net).

d. **How is the inner membrane installed when constructing a rated assembly against a rated CMU or concrete wall?**

- The inner gypsum membrane isn't typically req'd in this scenario b/c it can't provide a greater level of protection than the CMU or concrete and it is difficult to construct.



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- Steve Lineberger, Bldg Inspector, asked what to do when a property line is located within the assembly. Jeff Vernon said in that scenario the inner membrane would be req'd b/c each assembly should stand alone on either side of the property line.
- Andy Herring, Mega Inspections Team Manager, said to remember that fire blocking & fire stopping is still req'd to seal off all communication between spaces.
- Paul Ornelas, HCDT Plans Examiner/Inspector, asked if an Engr'd Judgement is req'd to remove the inner layer. Jeff Vernon, Bldg Code Administrator, said typically not, but we look at this on a case-by-case basis. There can be other factors like a property line that can still require the inner membrane to be in place.

e. **How is the 5' height measured on retaining walls to qualify them for SI?**

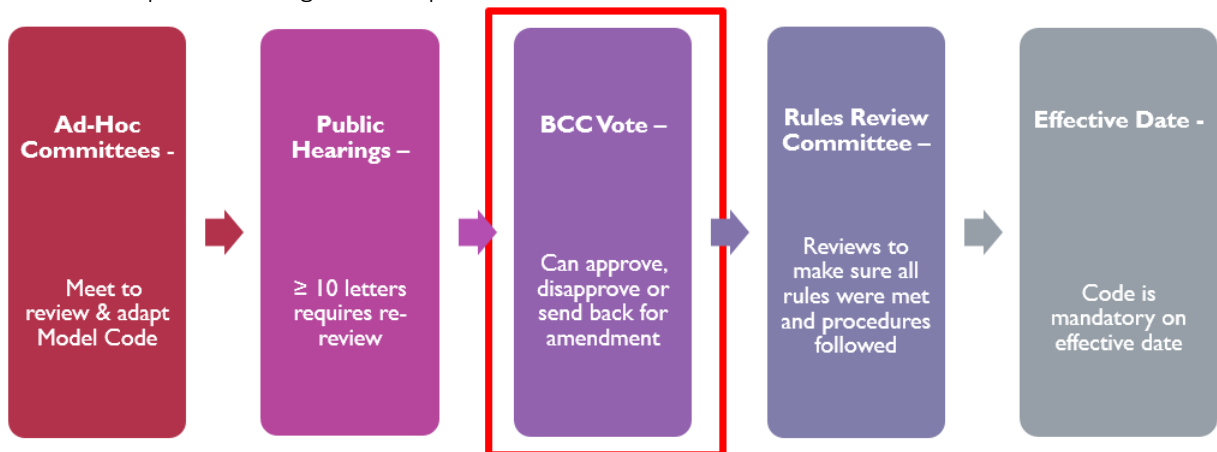
- The 5' height measurement for a retaining wall is the cumulative vertical height of relief provided by that wall and not simply the height of the wall.
- Please see the attached NC DOI Code Interpretation for 1807.2.5 for more info.

2. **Which edition of the Accessibility Standard will be used in the next Code cycle?**

The proposed 2018 NC Bldg Code will continue to reference the 2009 ANSI A117.1 because the next version of the ANSI code is still in draft format.

3. **Where are we in the Code change cycle?**

- a. We are currently in the Bldg Code Council (BCC) voting stage; this vote will occur in June. All public hearing time has passed.



- b. The effective date of the new code will be January 1, 2019 as legislated in the law that created the 6-year code cycle.
- a. Dale Brigham, Plans Examiner, asked if Jan 1, 2019 would be the drop-dead mandatory date. Jeff Vernon, Bldg Code Administrator, said that will be the call of the Code Enforcement Director to decide how long of a grace period is offered to allow the use of the previous code after Jan 1, 2019.
- c. **After** the new code passes the Rules & Review Committee of the BCC (see above) and **before** the effective date, specific sections of the 2018 NC Bldg Code can be used as an alternate method as long as its use is submitted to the Bldg Code Administrator through the established MCCE Alternate Methods & Materials procedure. This submittal would be on a per project basis.
- Please see attached Alternate Methods & Materials form for more info.



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- Paul Ornelas, HCDT Plans Examiner/Inspector, asked if this Alternates process took the place of an Engr'g Judgement (EJ). Jeff Vernon said no, they are two different things. EJ's require a Fire Protection Eng'r to validate a new assembly or creation.
- d. Training on the new 2018 NC Bldg Code will be available after the new code is printed; more info will be provided after the printing date is known.

4. What are the latest updates to the 2017 Accumulative Code Supplements?

The latest updates, which went into effect January 1, 2017, deal with the following sections:

- 706 – Fire Walls
- 902 – Definition for Night Clubs
- 1007.7 – Exterior Area of Assisted Rescue
- 1018.1 – Construction of Corridors; 712.4 continuity
- 1109.2.1 – Family / Assisted-use Toilet & Bathing Rooms
- 1109.14 – Recreational & Sports Facilities

These updates, along with all the previous updates, can be found at the following link:

http://www.ncdoi.com/OSFM/Engineering_and_Codes/Documents/2012_NCBuildingCode_amendments/2012-2017ApprovedCumulativeTest1Format.pdf

5. Are elevator call boxes required to be protected in rated walls?

- a. Yes, they shall be protected per section 713.3 b/c they are penetrating the rated wall.
- b. Section 713.3.2 for membrane penetrations refers compliance req'mts back to 713.3.1, which is for through penetrations. There are several exceptions under 713.3.2 for membrane penetrations, so please read carefully.

6. How is MCCE checking property lines and fire-separation distance during plan review?

Plans Examiners should be checking site plans – both A sheets and C sheets – for property lines, centerline of ROW, and assumed property lines to evaluate compliance with fire-separation distance req'mts.

7. Where should the location of H/C parking spaces be in multi-tenant developments & apartment complexes?

- a. H/C parking spaces should be located on the shortest route to the accessible entrance(s) and in multi-family complexes, should be located at the buildings where Type A units are provided.
- b. Scott Westbrook, Senior Plans Examiner CTAC/RTAC, asked where the H/C parking is req'd to be if the parking lot is an add'l lot on a separate parcel from the bldg being served. Jeff Vernon, Bldg Code Administrator, said the H/C parking has to be provide on that parcel as close to the public way or accessible path as possible.

8. How does insulation affect a UL assembly?

- a. The following is from the UL Directory concerning blanket insulation in 1-hr assemblies that **do not** already specify insulation or list it as "optional":

Unless specifically described in the individual designs, the addition of insulation in the concealed space between the ceiling membrane and the floor or roof structure may reduce the hourly rating of an assembly by causing premature disruption of the ceiling membrane and/or higher temperatures on structural components under fire-exposure conditions.

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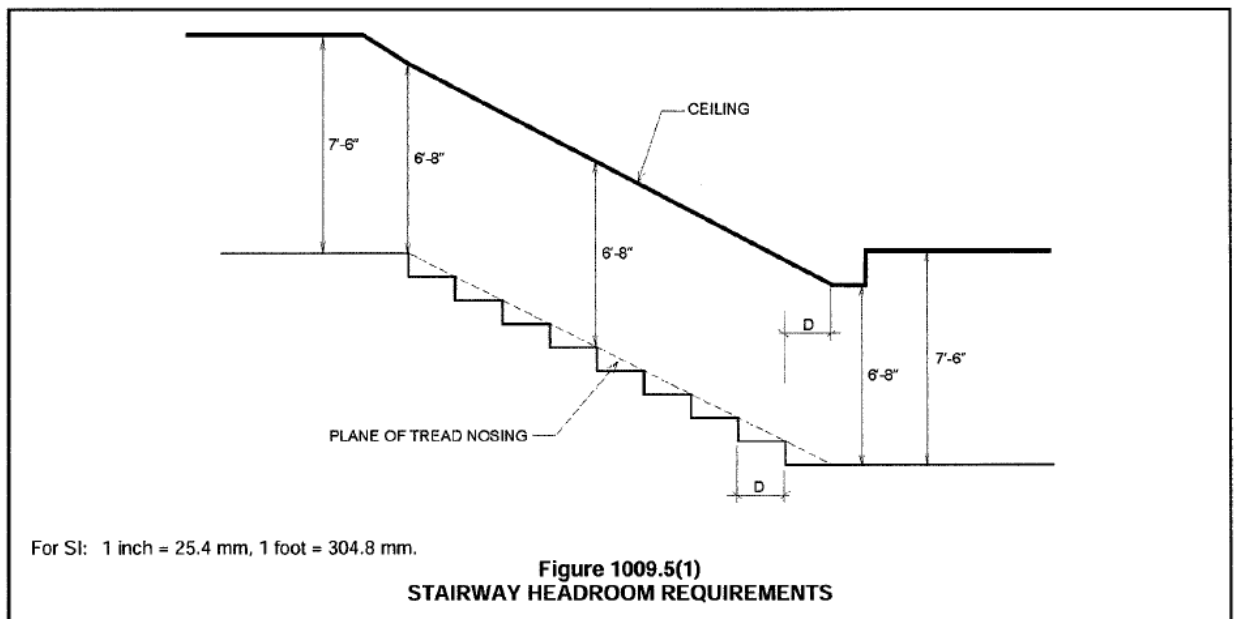
Insulation in G500, L500, M500 and P500 Series Designs — For 1-hour-rated G500, L500, M500 and P500 Series assemblies, fiberglass insulation, either loose-fill, or faced or unfaced batts or blankets may be added to the plenum or joist space above the gypsum board, provided an additional layer of gypsum board is added to the assembly. The gypsum board should be of the same type as shown in the individual designs. The base layer of gypsum board should be attached with the fastener type and spacing as described in the design. It is not necessary to tape the joints of the base layer. The finish layer of gypsum board should also be attached with the fastener type and spacing as described in the individual design. The length of the fasteners should be increased by a minimum of the gypsum board thickness of the additional layer. The joints in the finish layer should be finished as described in the design.

Other methods of adding insulation in the plenum or joist cavity are not permitted unless indicated in the individual designs.

- b. Measures to compensate for added insulation other than what is specified by UL above would be handled as an EJ.
- c. There is currently no conclusive data showing exactly how much the inclusion of insulation in an assembly tested without it would reduce the hourly rating of the assembly.

9. What is the requirement for headroom on landings in a stairway?

- a. Per Carl Martin & Barry Gupton of NC DOI, the current Code includes the stair(s) and landing(s) as part of the stairway, so the required landing headroom is 6'8". There is a diagram (below) from the ICC commentary showing a transition from 7'6" to 6'8" at the landing.



10. Items skipped due to time constraints; these will be revisited at the May meeting:

- a. When can inspections be stopped and marked as not ready?
- b. When is SI required? What does the plans examiner look for?
- c. When are shop drawings allowed?
- d. Are stair framing members allowed to penetrate the enclosure wall?



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11. Questions / clarifications / comments from the floor:

- a. How does one distribute & disperse Type A & B units in a student housing configuration where the residents are leasing individual bedrooms, each bedroom has its own bathroom, but the residents share the living area & kitchen? This will be covered by Laurel Wright in her training presentation on Accessibility in May.

Training Topic – Mag Tech & Thermacrete – 2hrs of Technical ISO

- Presenter: David Markle, Sales & Marketing Director for Thermacrete; Business Development Director for Mag Tech
- Total in attendance:
 - 30 – MCCE staff
 - 2 – from outside MCCE

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
1202 Mail Service Center, Raleigh, NC 27699-1202
919-661-5880**

Retaining Wall Cumulative Vertical Height

Code: 2012 North Carolina Building Code
Section: 1807.2.5

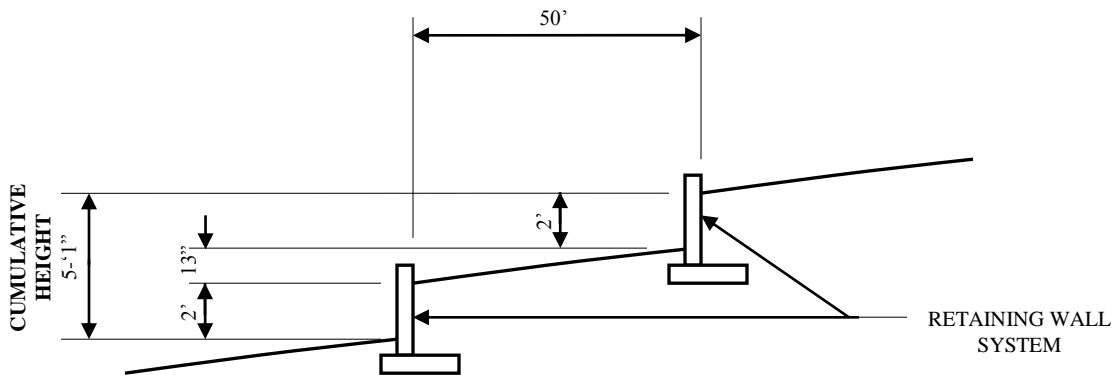
Date: April 15, 2016
Rev: 2

Question:

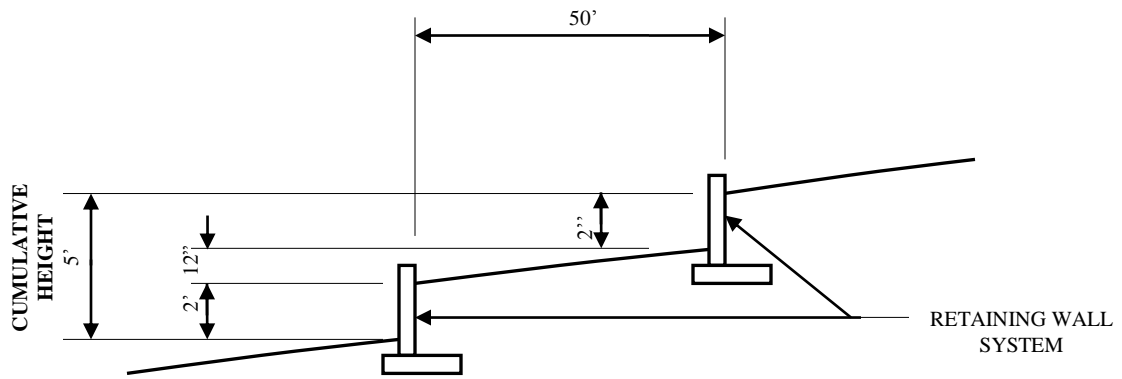
Is Section 1807.5.2 of the code indicating that a retaining wall or series of retaining walls that retain more than 5' in height of earth within a linear 50' distance measured perpendicular to the retaining wall is required to be designed by a NC registered design professional?

Answer:

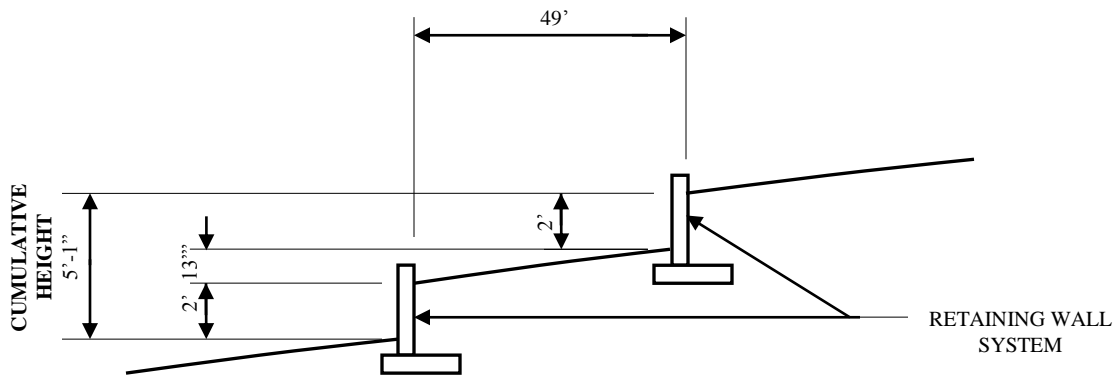
Yes. The following section details will help explain when a design professional is required. Of course, any single retaining wall that retains more than 5' of unbalanced fill is required to be designed by a NC registered design professional. Note that for this code section the vertical height (relief) is the difference in elevation from grade level on the open side of the wall to the grade level on the fill side of the wall.



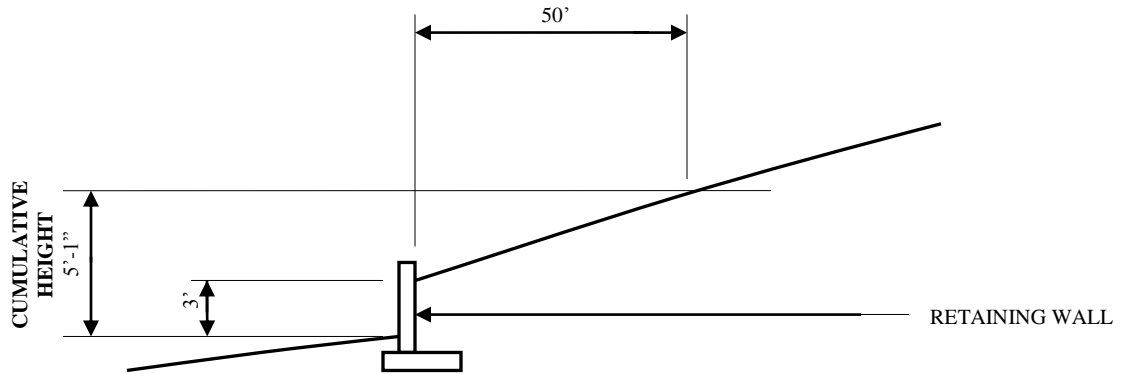
EXAMPLE - A
DESIGN PROFESSIONAL REQUIRED



EXAMPLE - B
DESIGN PROFESSIONAL NOT REQUIRED



EXAMPLE - C
DESIGN PROFESSIONAL REQUIRED



EXAMPLE - D
DESIGN PROFESSIONAL REQUIRED

Keywords:
grading, slope



MECKLENBURG COUNTY
Code Enforcement

REQUEST FOR ALTERNATE METHOD / MATERIAL

Project Information:

Residential Single Family Project: Y N	Commercial Project: Y N
Code Enforcement Project No:	Permit No:
Project Name:	Owner:
Project Address:	Suite No:
Date Requested:	

Person Requesting the Alternate Method / Material:

Name:	
Requestor's Association with the Project:	
Phone Numbers:	Office: Mobile:
Email Address:	
Mailing Address:	

Registered Design Professional in Responsible Charge (RDPIRC):

(Architects or Engineers must be licensed in the State of North Carolina)

Name:	
Firm Name:	
Phone Numbers:	Office: Mobile:
Email Address:	
Mailing Address:	

CODE SECTION(S) FOR WHICH THE ALTERNATE IS BEING REQUESTED:

Trade(s)	Code Year	Section Number & Title
B E M P		
B E M P		

Reason for Alternate Request: _____

Explain how the proposed alternate continues to maintain the spirit and the intent of the Code (i.e. how it is equivalent to the level of protection prescribed by the Code: _____

Please identify any supporting documentation attached to this request. (e.g. test data, Materials Safety Data Sheets, etc.)

- 1.
- 2.
- 3.

Additional Comments: _____

Signatures:

Requestor

RDPIRC

Office use only

Results: Approved Denied Need More Information Cancelled

Reason: _____

Code Administrator

Director, Code Enforcement (optional)

Alternate Method / Material Process:

Per NC Administrative Codes and Policies, section 105, alternate materials, designs or methods of construction are allowed by the code provided the alternate has been approved by the Code Enforcement Official. In Mecklenburg County, these are reviewed by the Code Administrator for the respective trade(s) and/ or the Director of Code Enforcement using the following procedure.

- The Registered Design Professional in Responsible Charge (RDPIRC), the owner, a lessee or other duly authorized representative for the project must submit a letter of request on company letterhead that includes the following information along with supporting documentation.
 - Identify the project by address, project number and / or permit number as applicable.
 - Identify the code section(s) involved and state which material or method is to be substituted, omitted or excepted from the code requirement.
 - Identify the proposed alternate and explain how the alternate material or method will re-establish the project to the equivalent level as prescribed by code. Note: if the proposed alternate does not establish equivalency, it cannot be approved for use in the project.
- The applicant shall provide all supporting data, technical reports, product data sheets, drawings, sketches, computer models, calculations and / or other data that substantiates and justifies the request. The information supplied shall be specific to the products to be used on the project.
- Unless otherwise noted, the approval of an alternate material or method is specific to a particular project and shall not be applied to other projects. Each submittal shall be evaluated on the conditions and merits of the request for each individual project.

If you have questions or comments, please contact the appropriate Code Administrator for additional information on this process.

Code Administrators

 Building - Jeff Vernon, 980-314-3097
Jeff.Vernon@Mecklenburgcountync.gov

 Electrical - Gary Mullis, 980-314-3098
Gary.Mullis@Mecklenburgcountync.gov

 Mechanical and Plumbing – Tommy Rowland, 980-314-3099
Tommy.Rowland@Mecklenburgcountync.gov

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